Figure 1 : Partition of Oil Soluble Scale Inhibitor (Chem II) at Different Temperatures

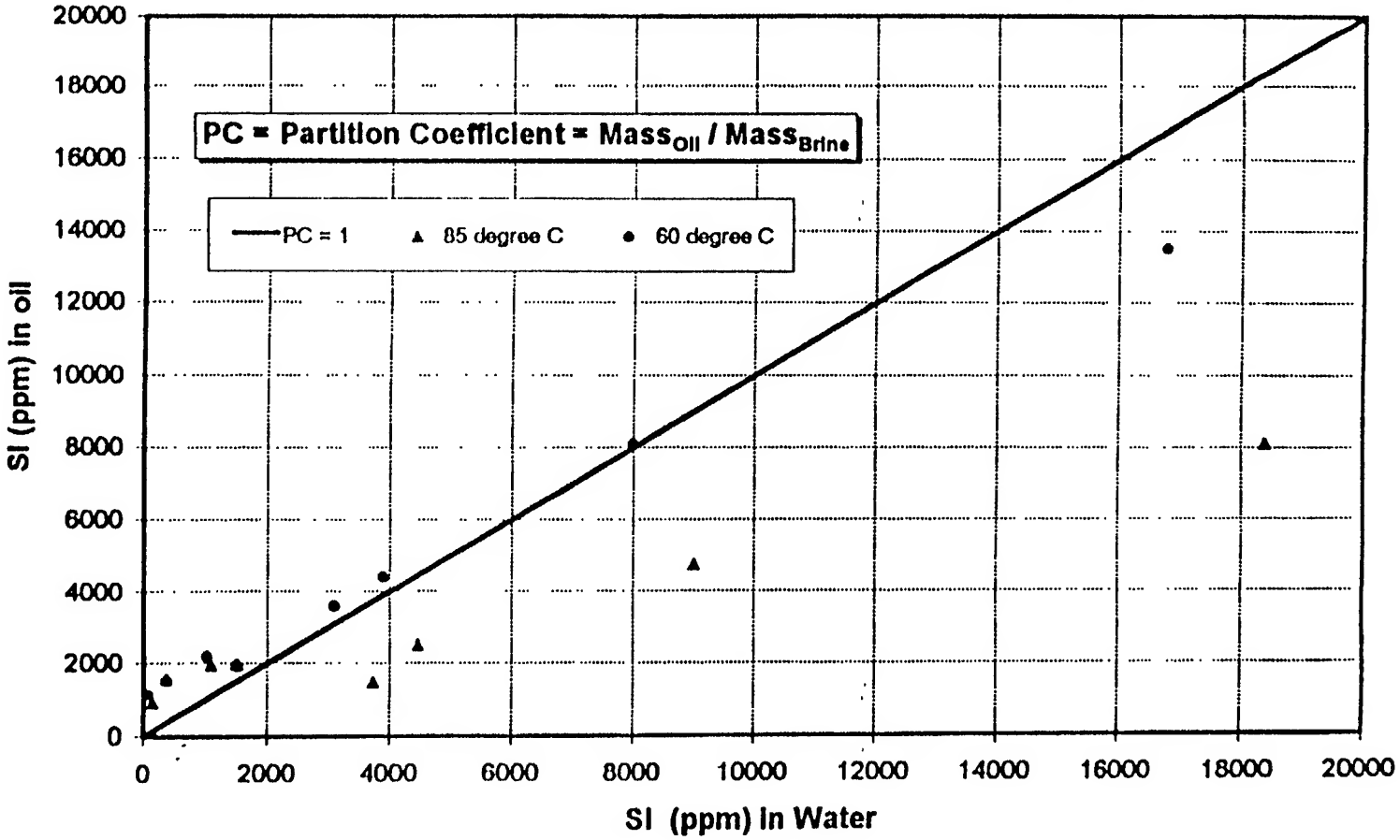


Figure 2 : Partition of OSI with Different Initial Concentrations

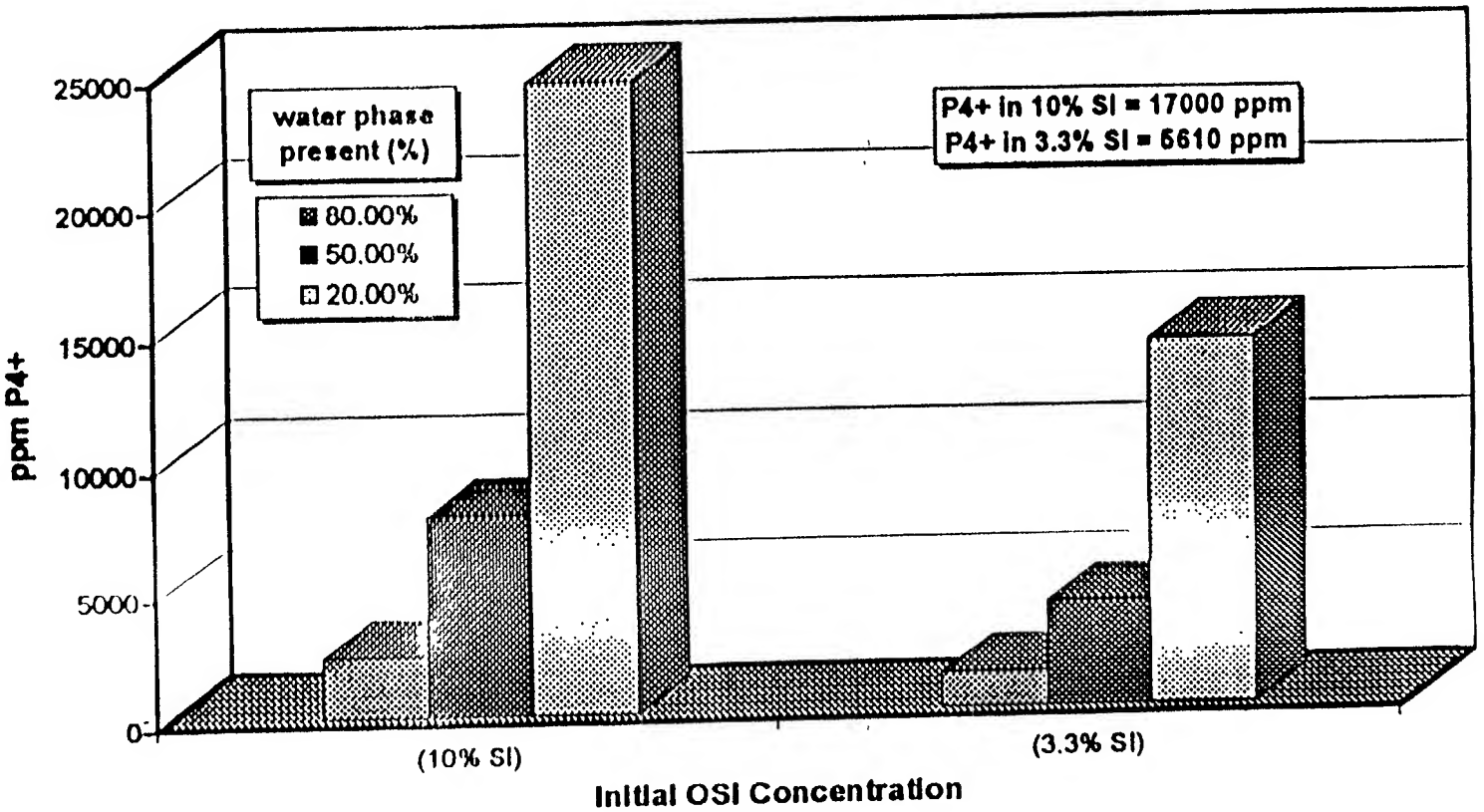


Figure 3 : MIC of Chem I (water based) using Brine C @90°C

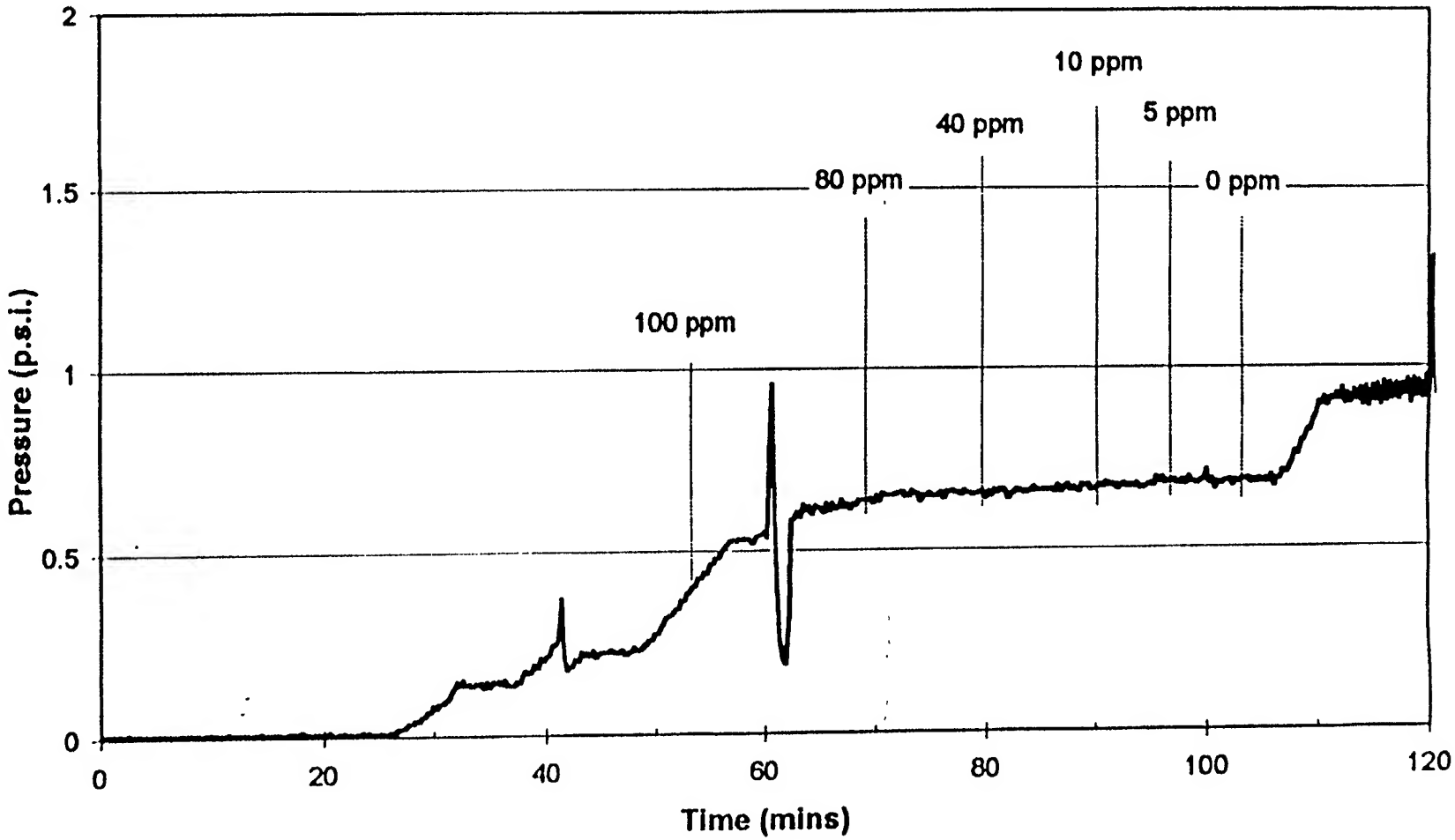


Figure 4 : MIC of Chem I (Oil based) using Brine C @90°C

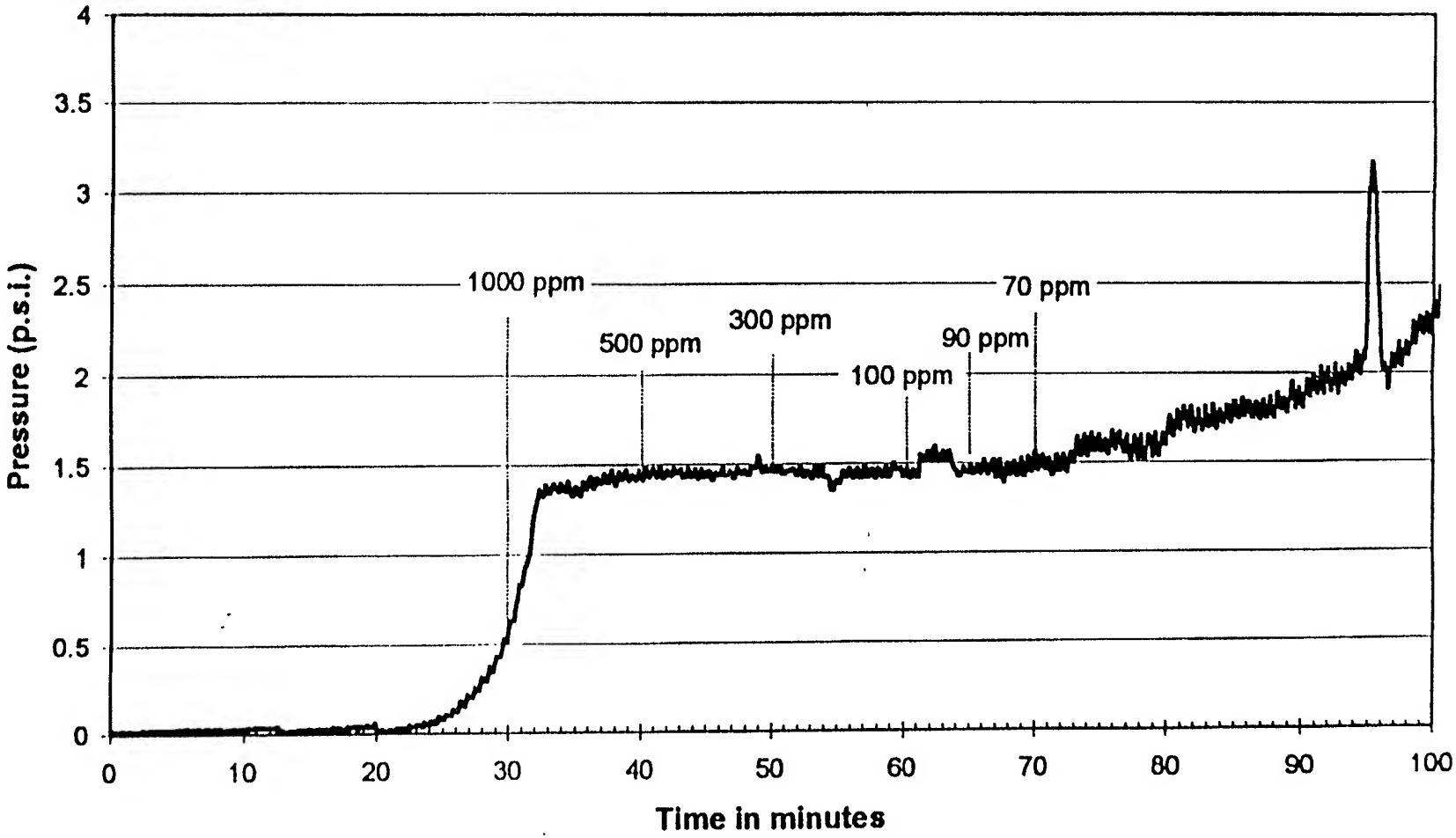


Figure 5 : MIC of Chem II (water based) using Brine C @90°C

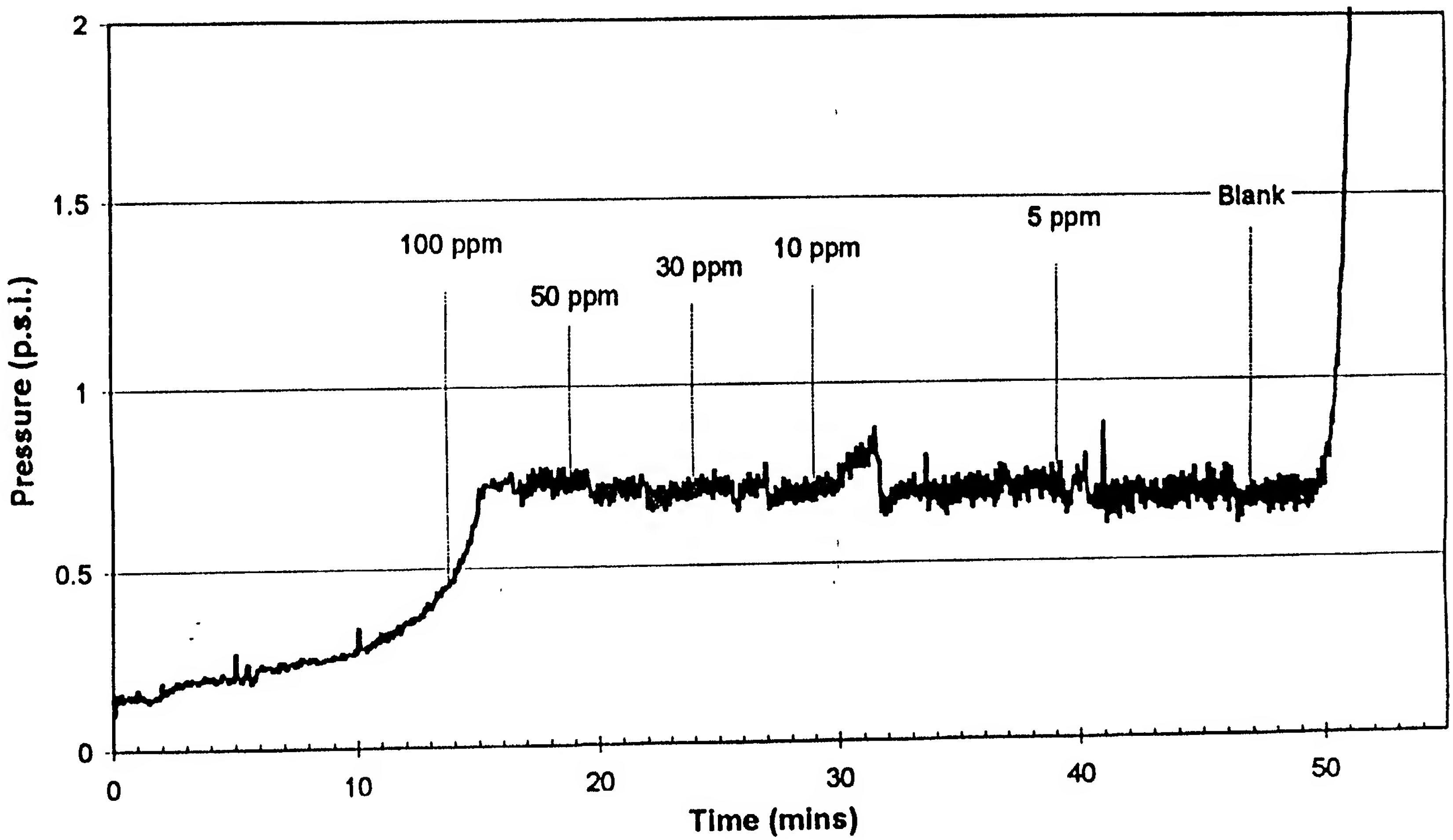


Figure 6 : MIC of Chem II (Oil based) using Brine C @90oC

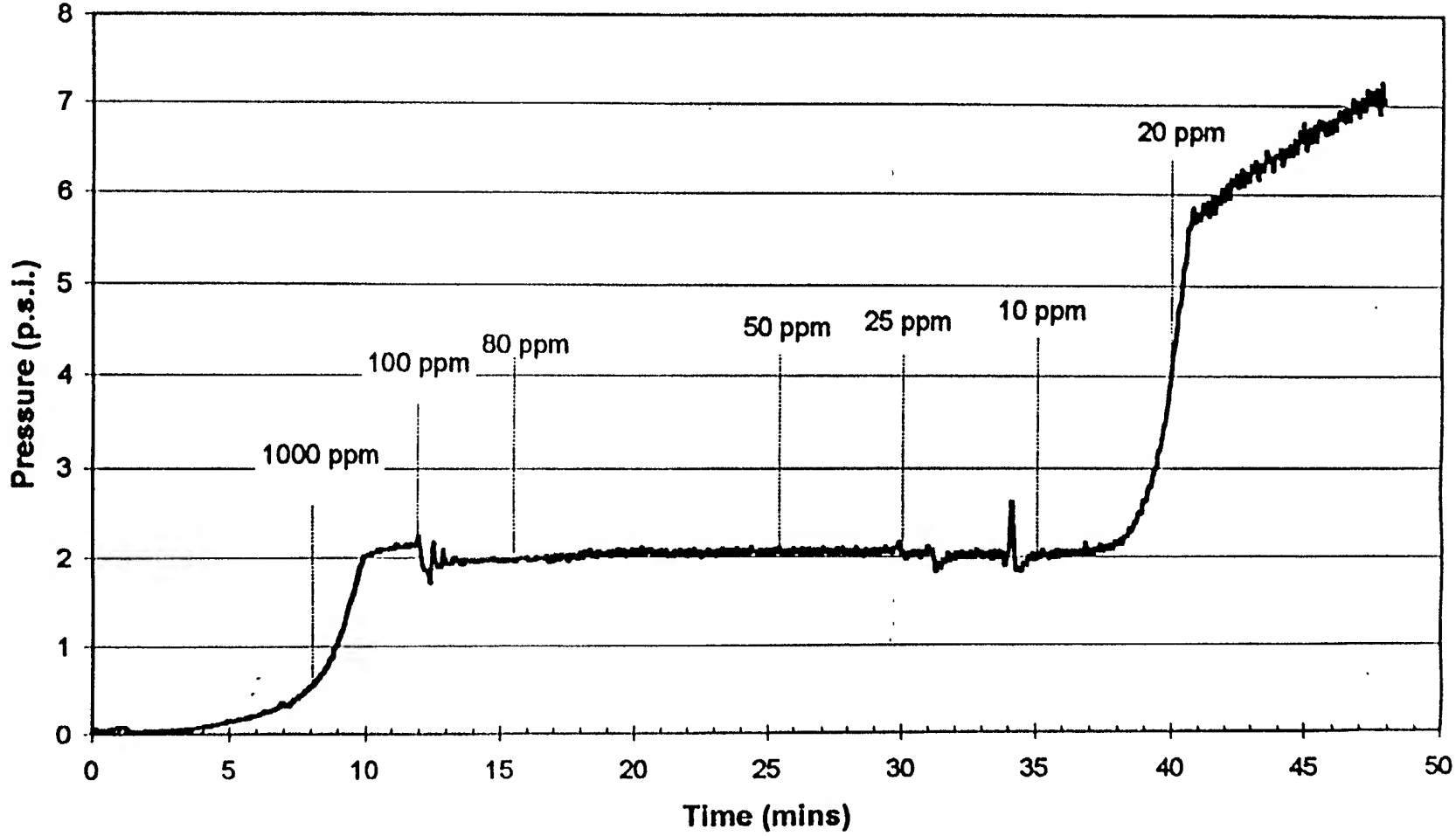


Figure 7 : MIC of Chem III (water based) using Brine C @90°C

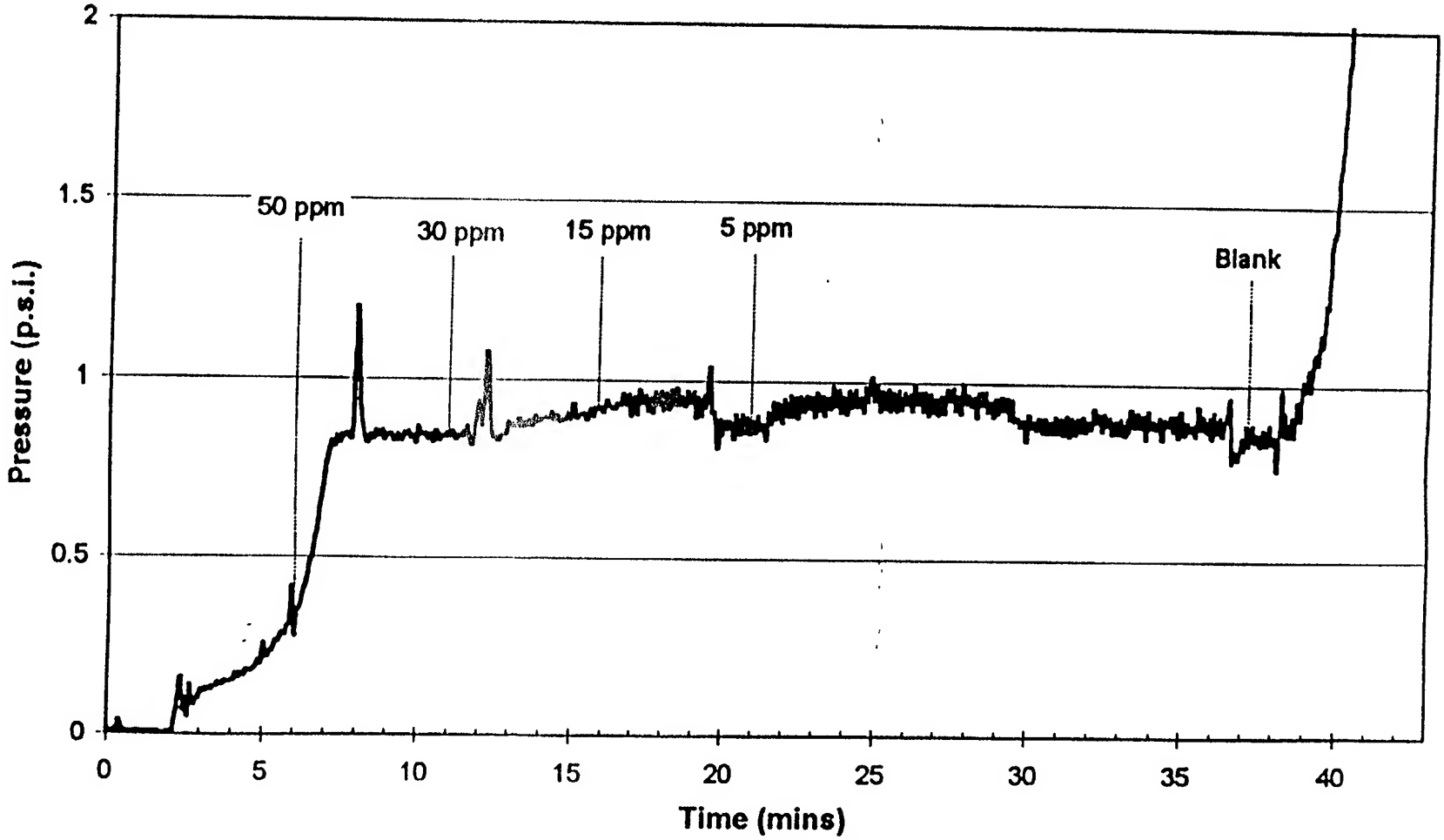


Figure 8 : MIC of Chem III (Oil based) using Brine C @90°C

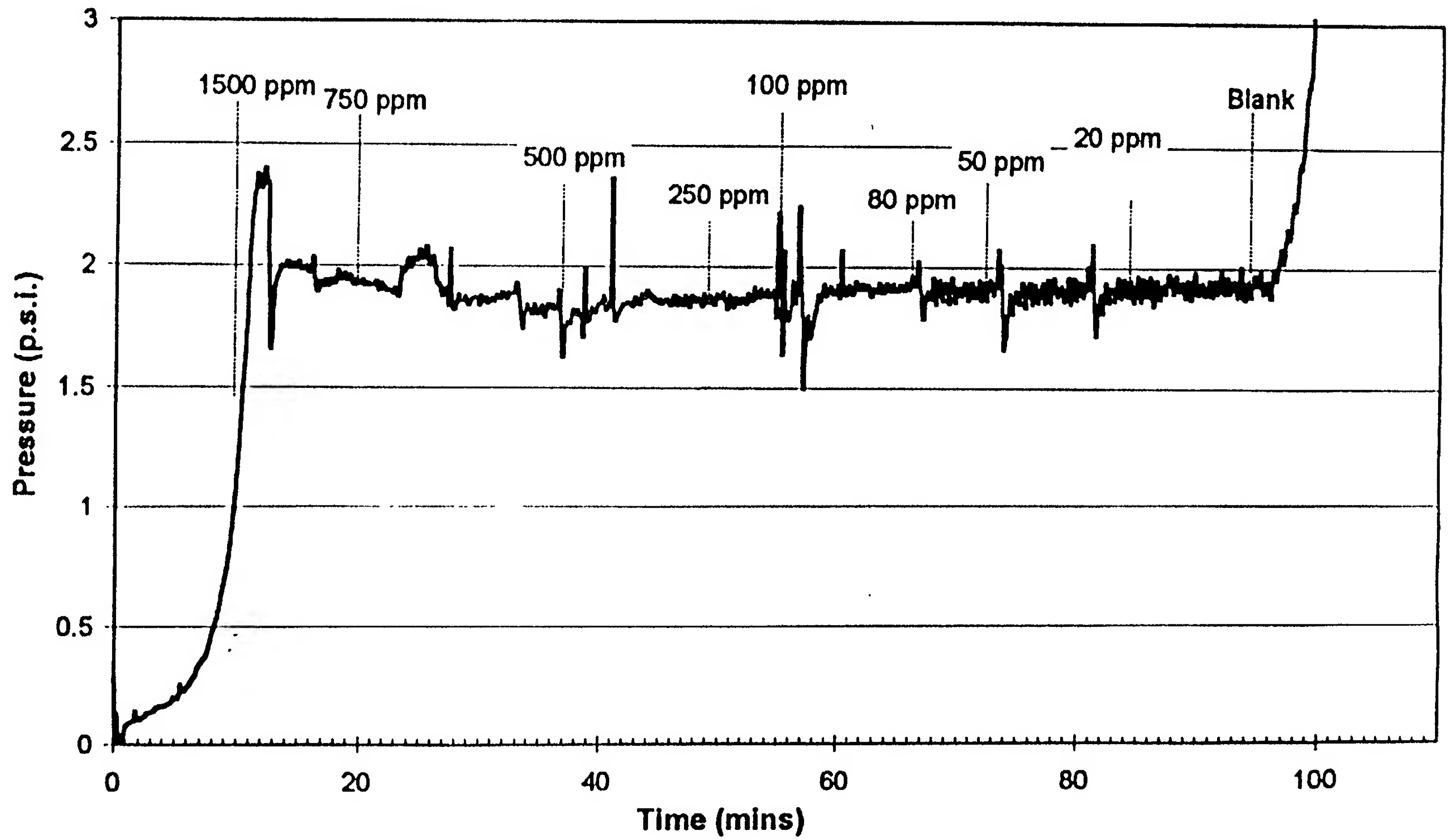
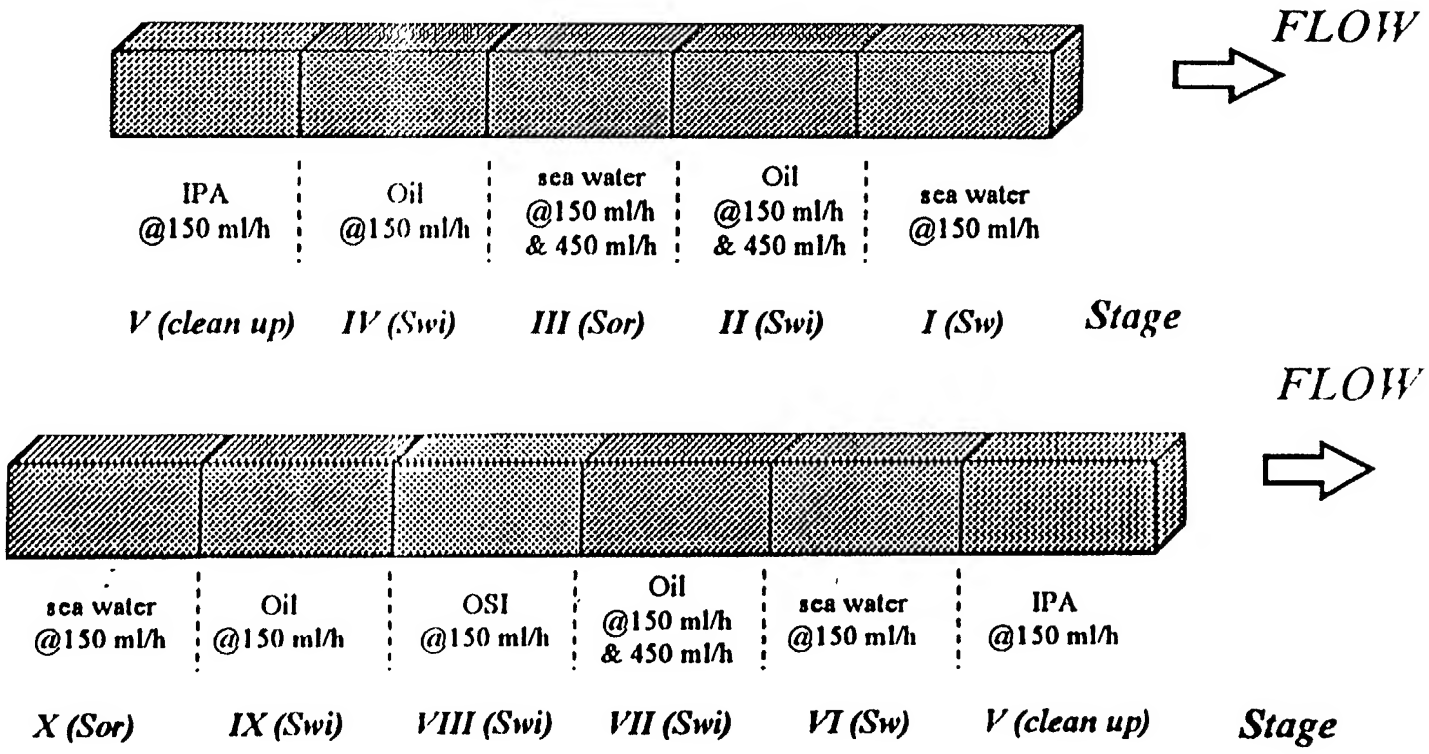


Figure 9: Injectivity Tests @90°C



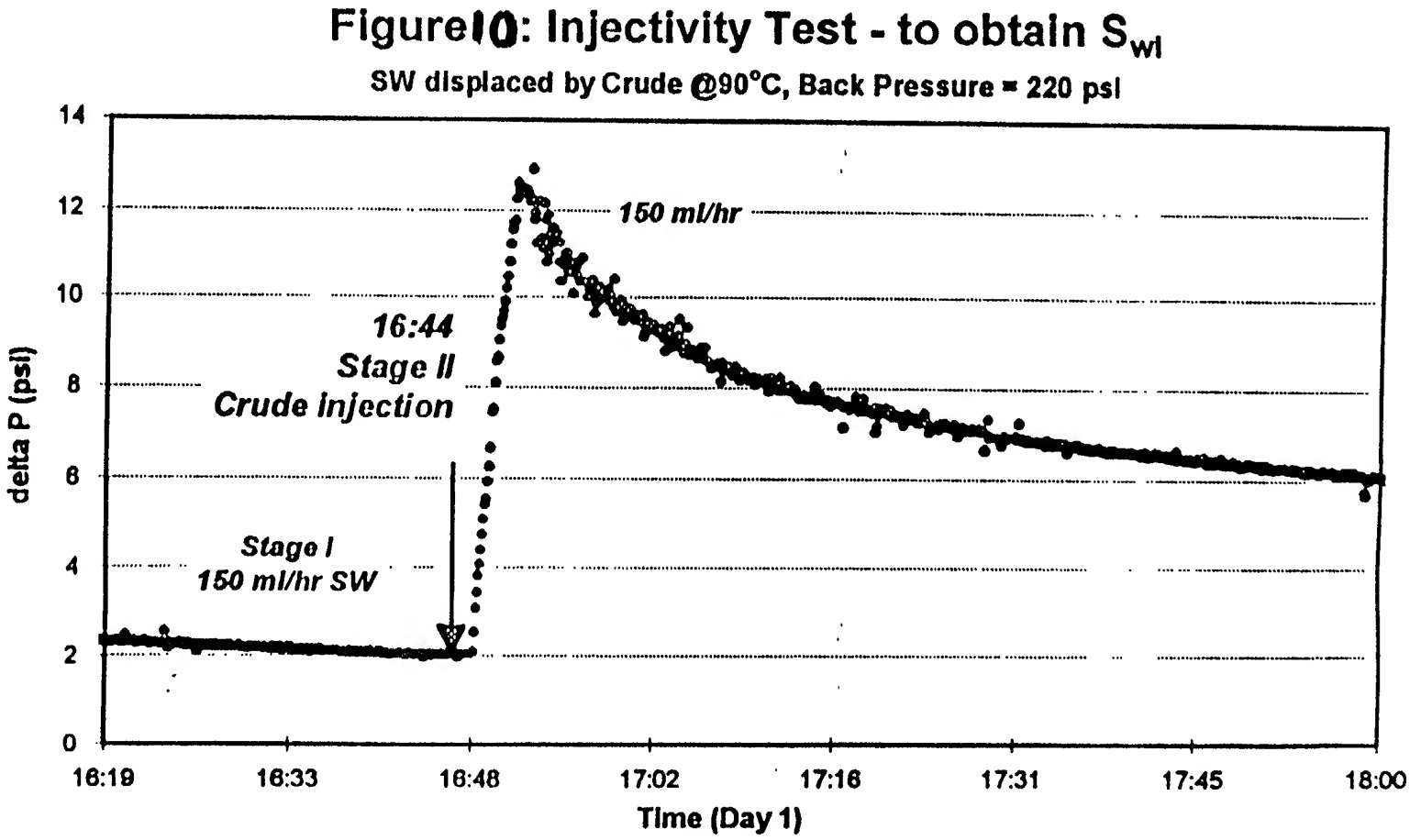


Figure 11: Injectivity Test - From Swi to Sor

Crude displaced by sea water @90°C, BP = 220 psi

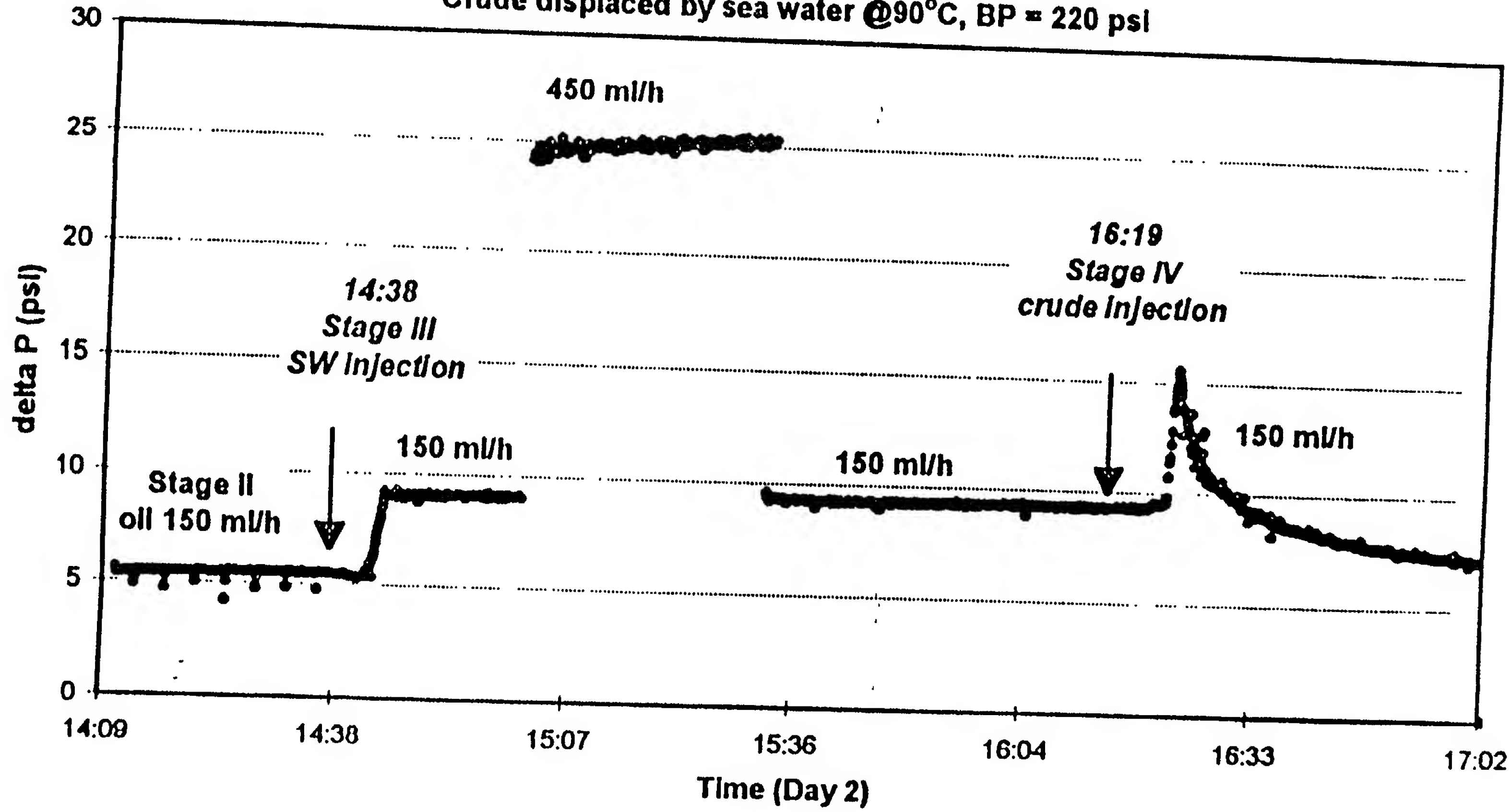


Figure 12: Core Cleaned with Miscible Solvent (IPA)

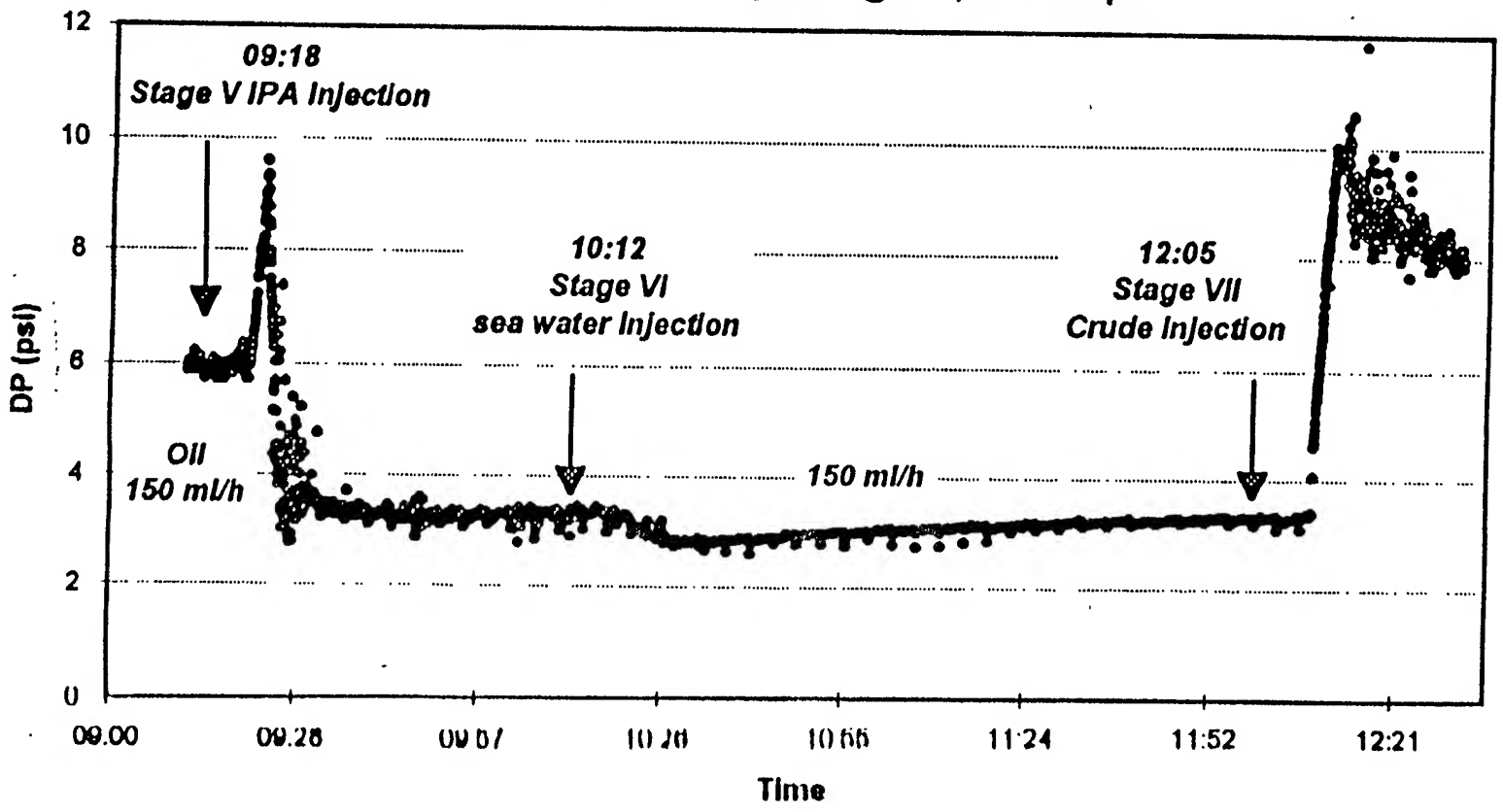


Figure 13: Oil Soluble Scale Inhibitor Injection

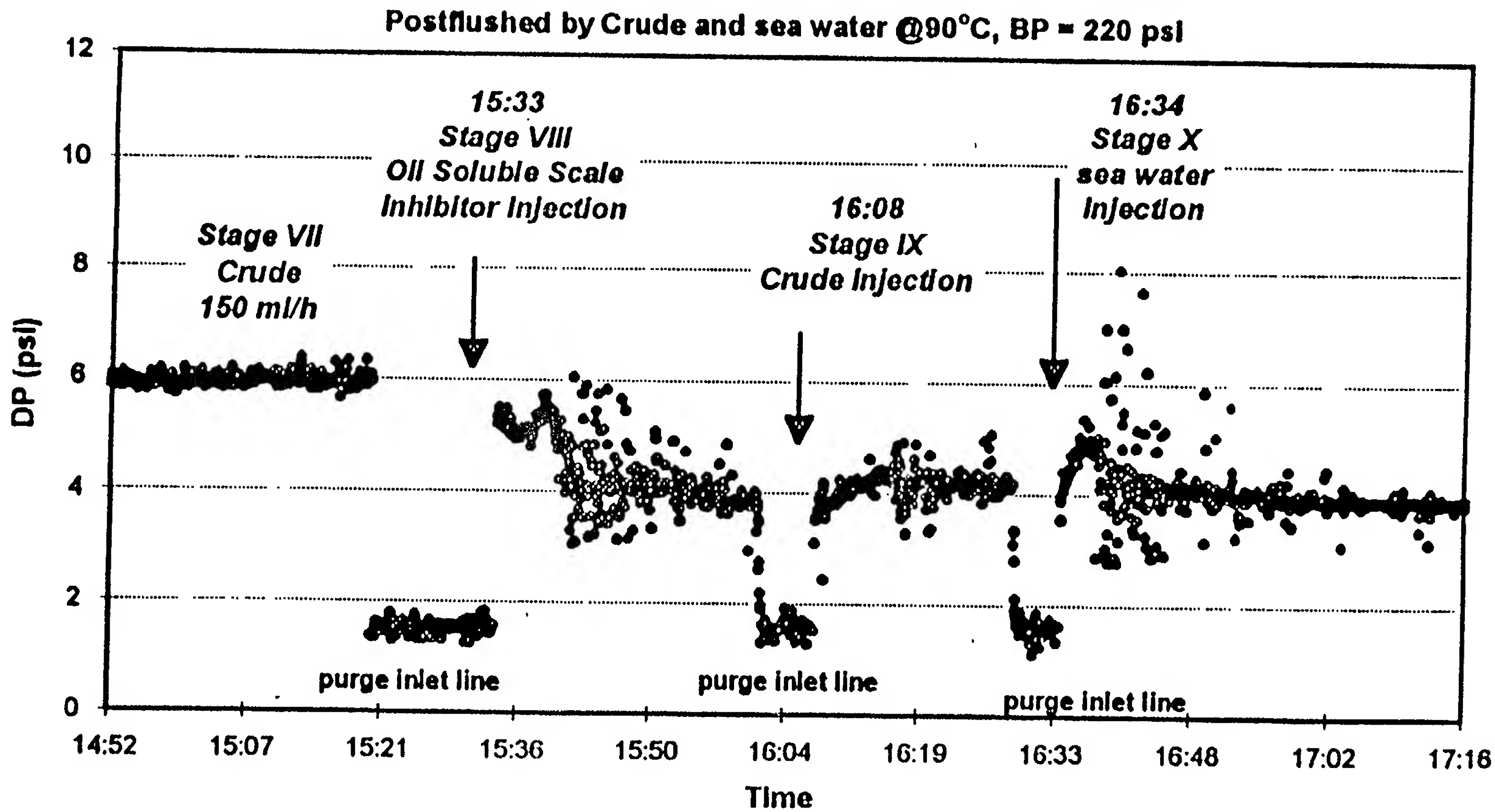


Figure 14. Plug 5. Ambient Temperature Kerosene Flood. A = 120 cc/hr, B = Ramp to 300 cc/hr, C = 120 cc/hr and ko,eff (l).

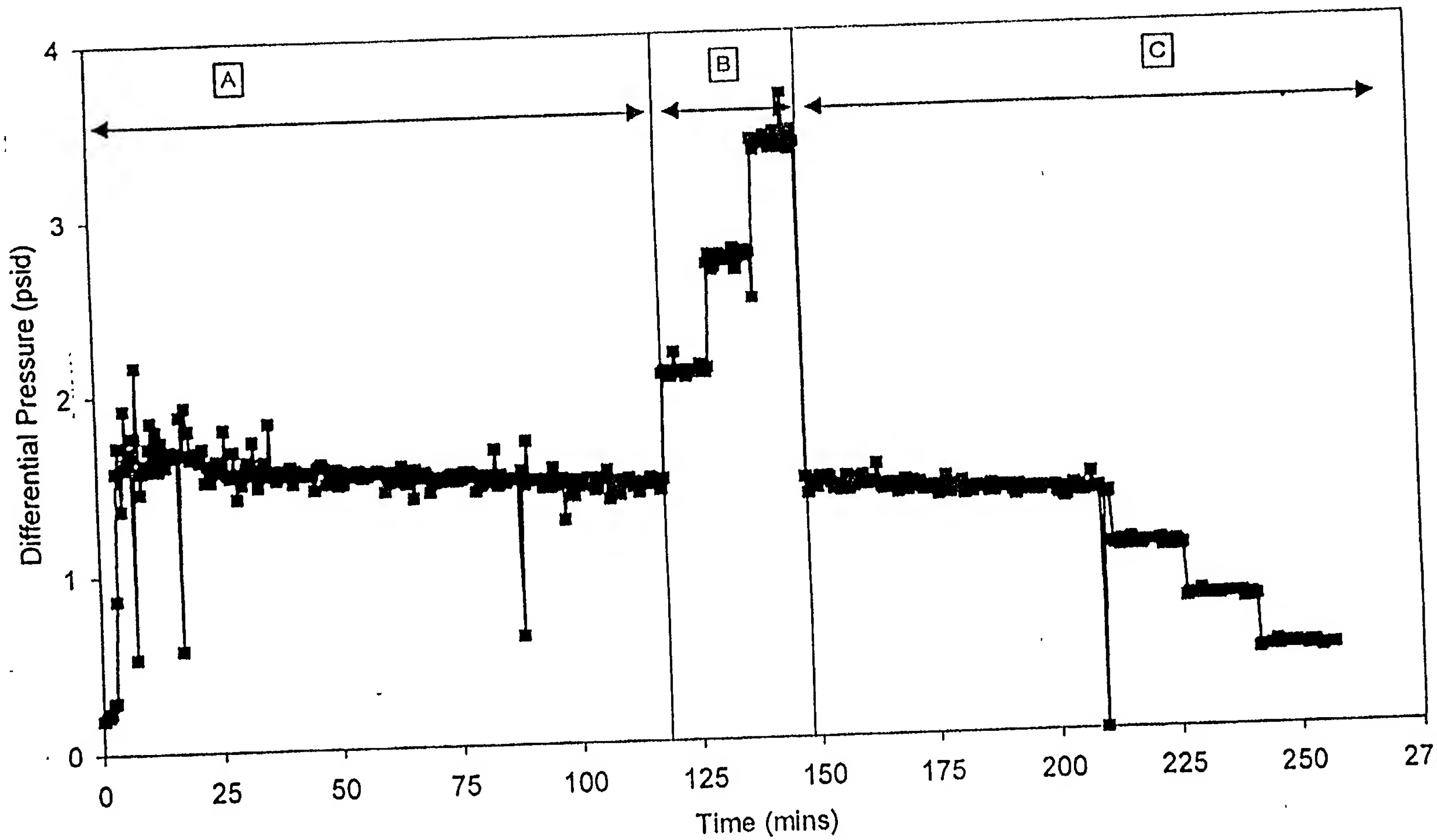


Figure 15. Plug 5. ko,eff (l) Kerosene. T = 19.6 C, ko,eff. = 350 mD

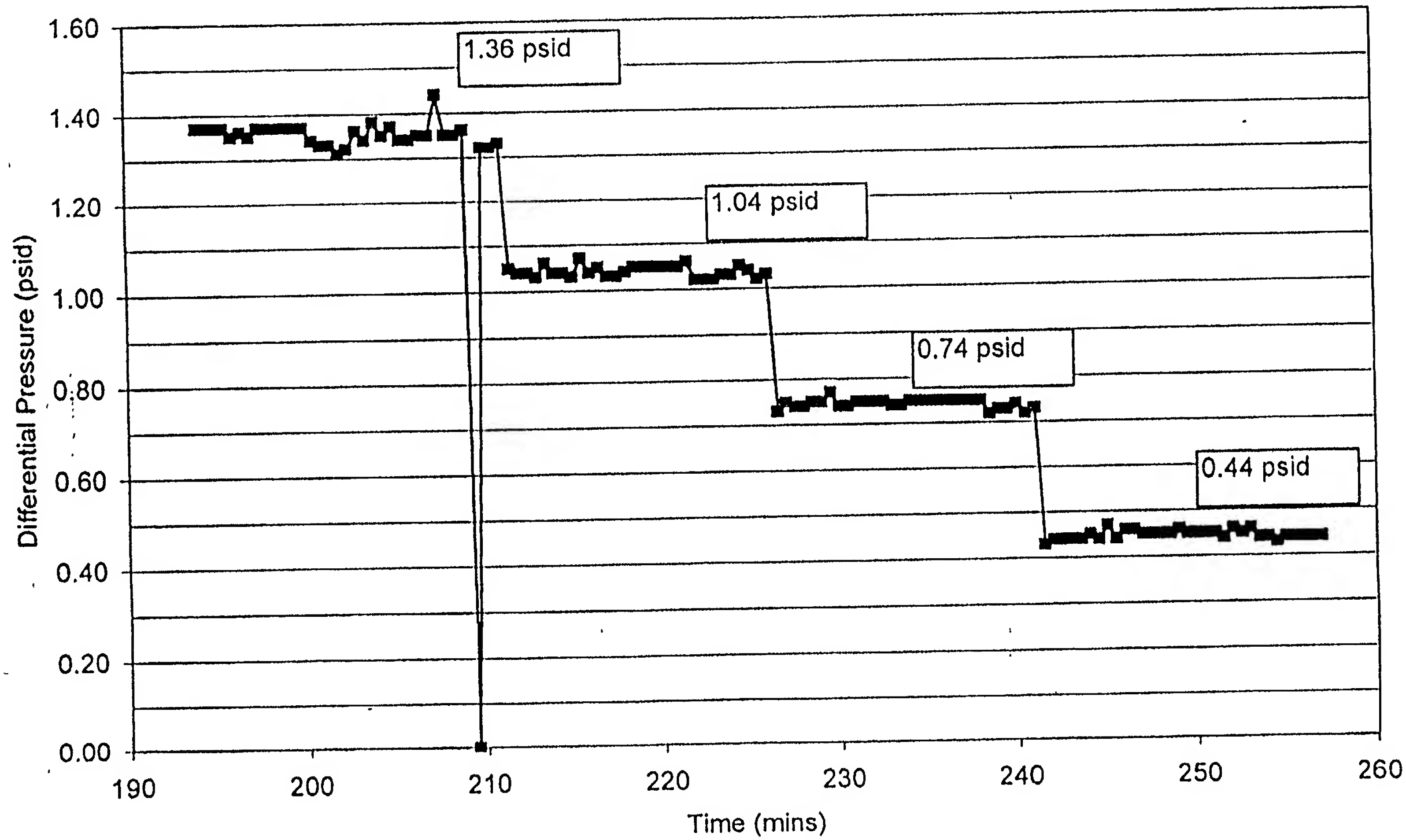


Figure 16. Plug 5. Crude Oil Flood and ko,eff (II). T = 125 C. Rates 120, 90, 60, 30 cc/hr.

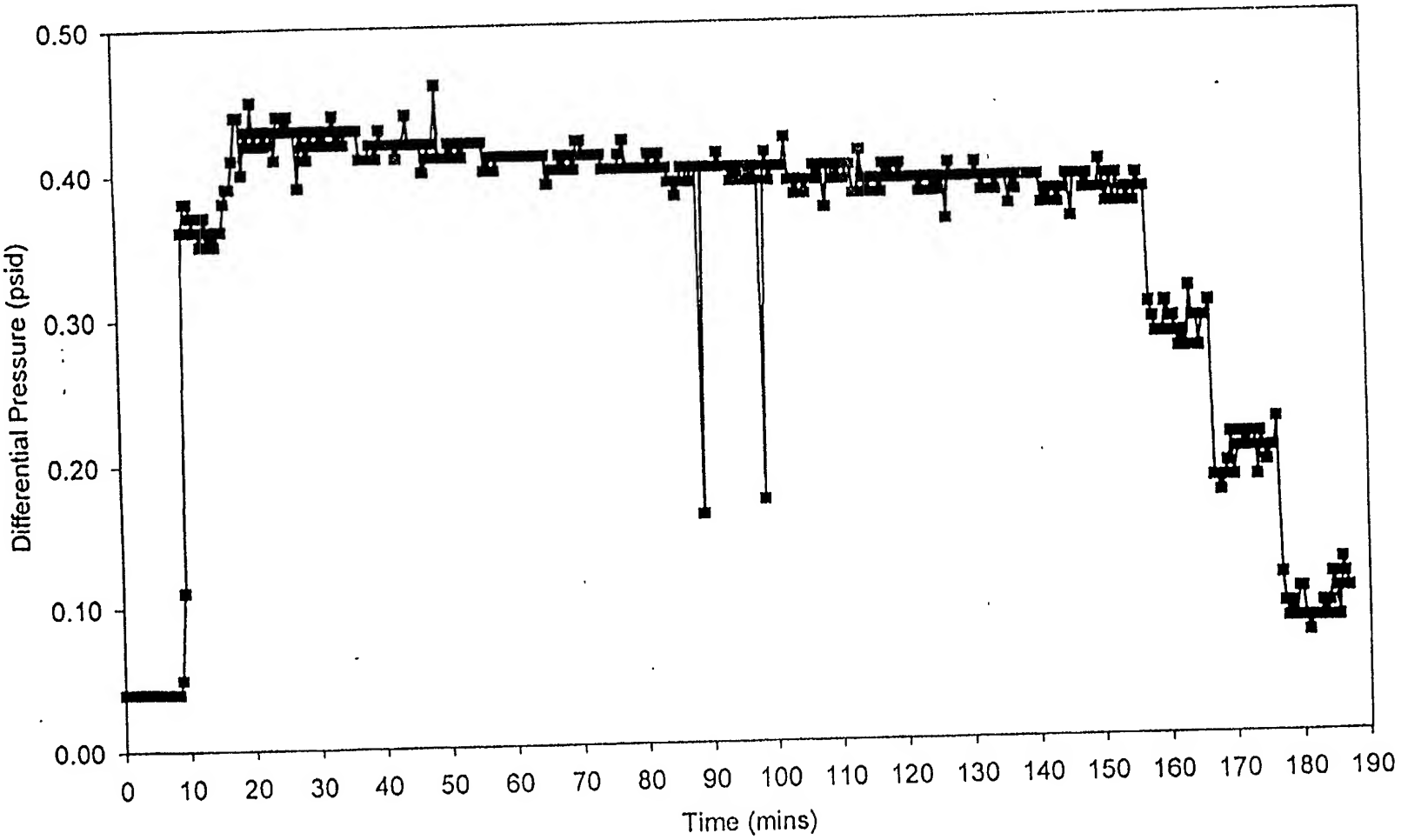


Figure 17. Plug 5. ko,eff(II). T = 125 C. Rates = 120, 90, 60, 30 cc/hr (detail).

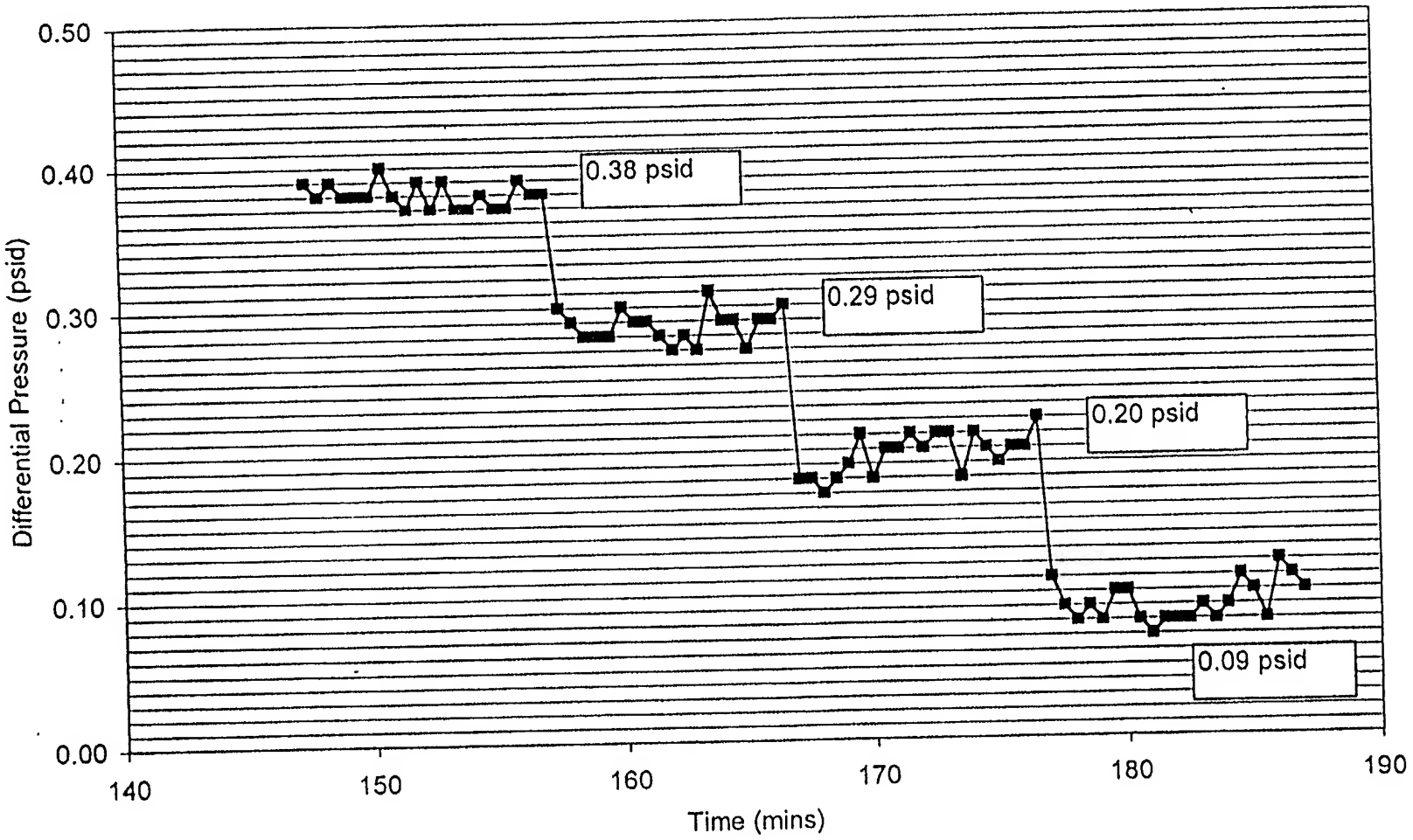


Figure 18. Plug 5. Chemical Injection. T = 125 C. All Stages = 120 cc/hr, A = Crude Oil, B = ArivaSol, C = OSi 153, D = OSi EXP1, E = ArivaSol. Transducer Zero = 0.04 psid.

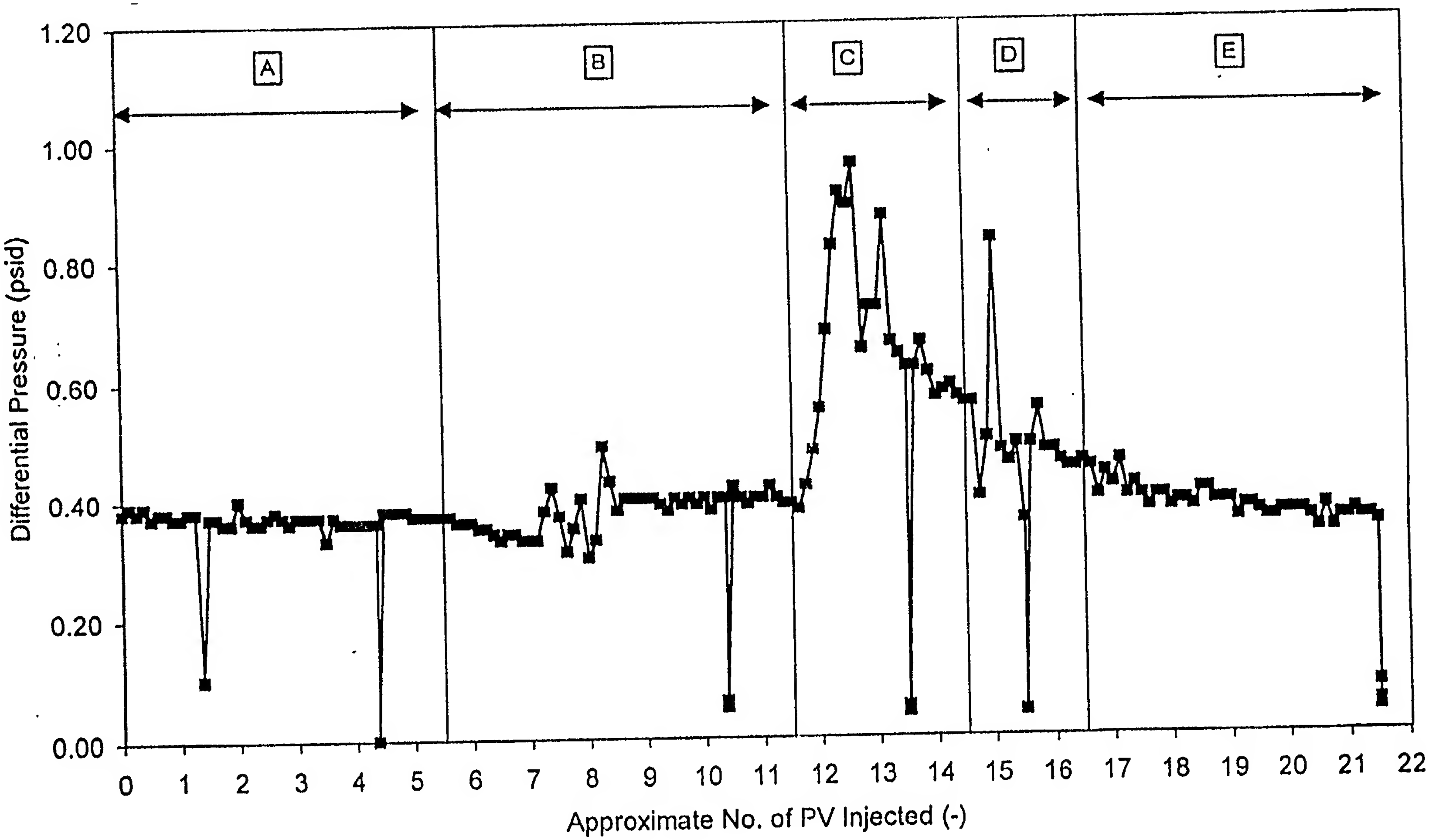


Figure 19. Plug 5. Chemical Return. T = 125 C. All Stages = 120 cc/hr, A = ArivaSol Overflush Return, B = Osi EXP1, C = Osi EXP2, D = ArivaSol, Transducer Zero = 0.02 psid.

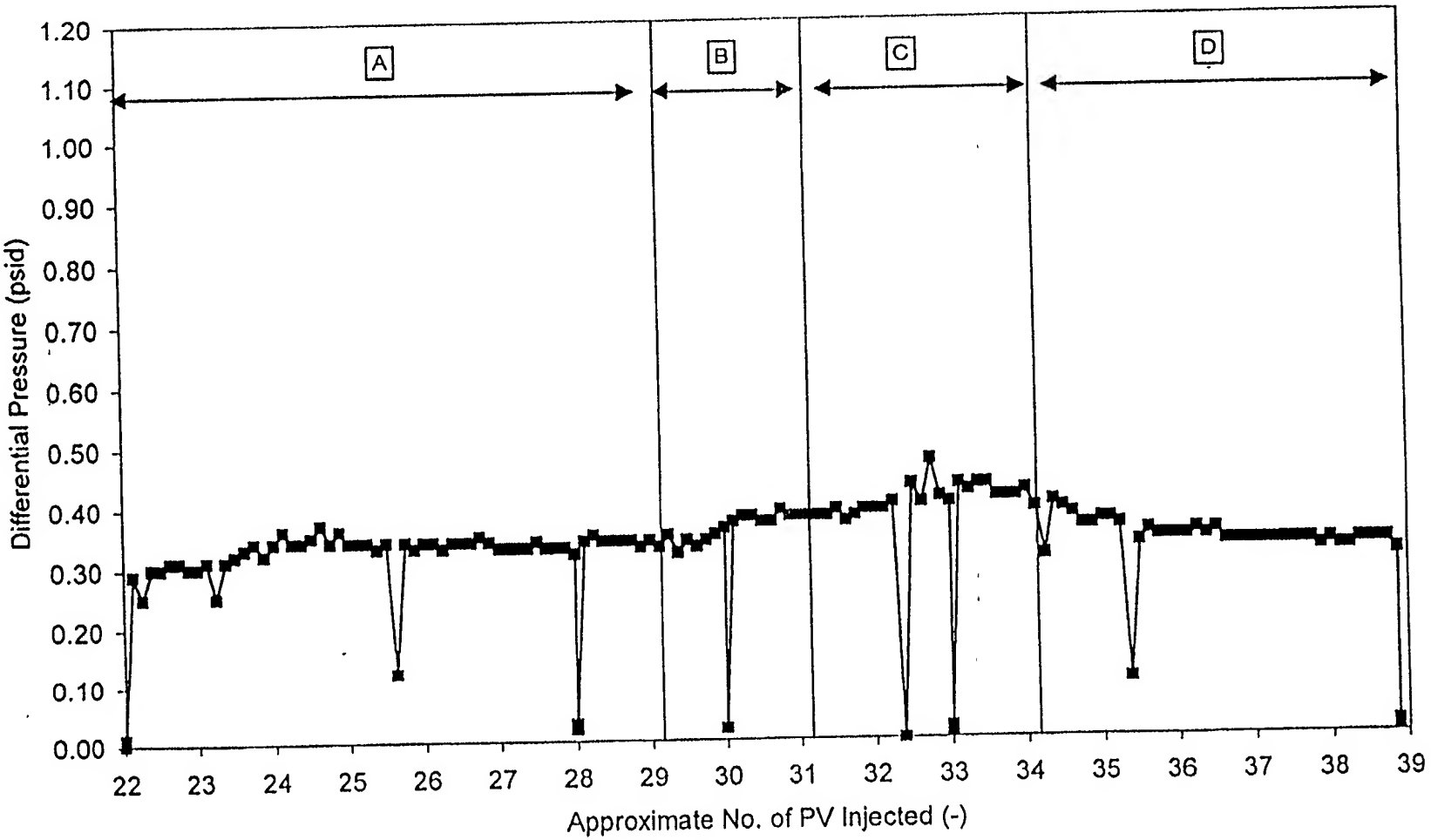


Figure 20. Plug 5. Crude Oil Return and Final Permeability. T = 125 C. A = ArivaSol, 120 cc/hr, B = Crude Oil Return and Ko,eff, 120, 90, 60, 30 cc/hr. Transducer Zero = 0.02 psid.

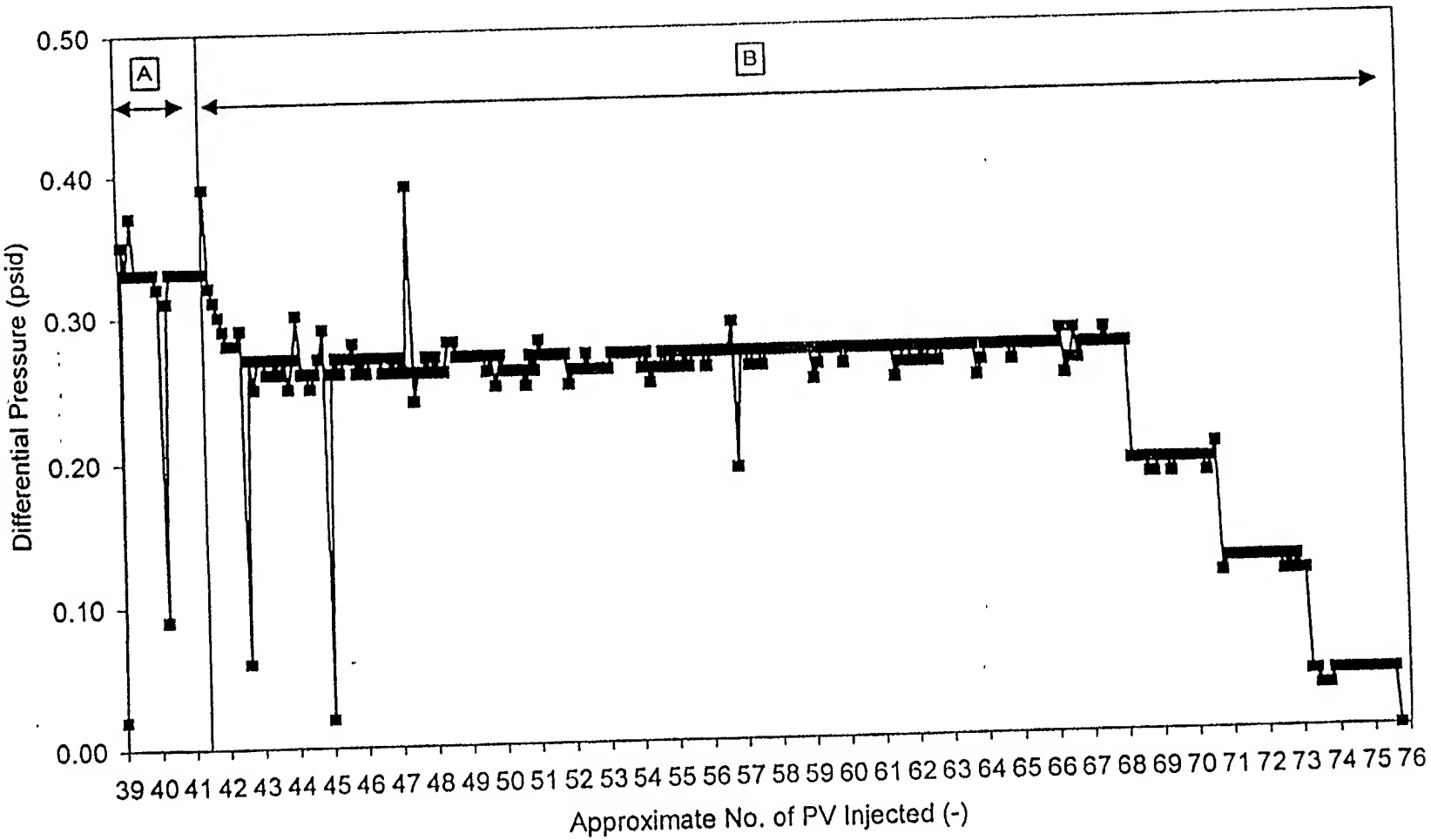


Figure 21. Plug 5. Final Ko,eff III (Detail). T = 125 C. Rates = 120, 90, 60, 30 cc/hr. Final Permeability = 443 mD for oil mix viscosity 0.63 cp. % Return Oil Permeability = 127%.

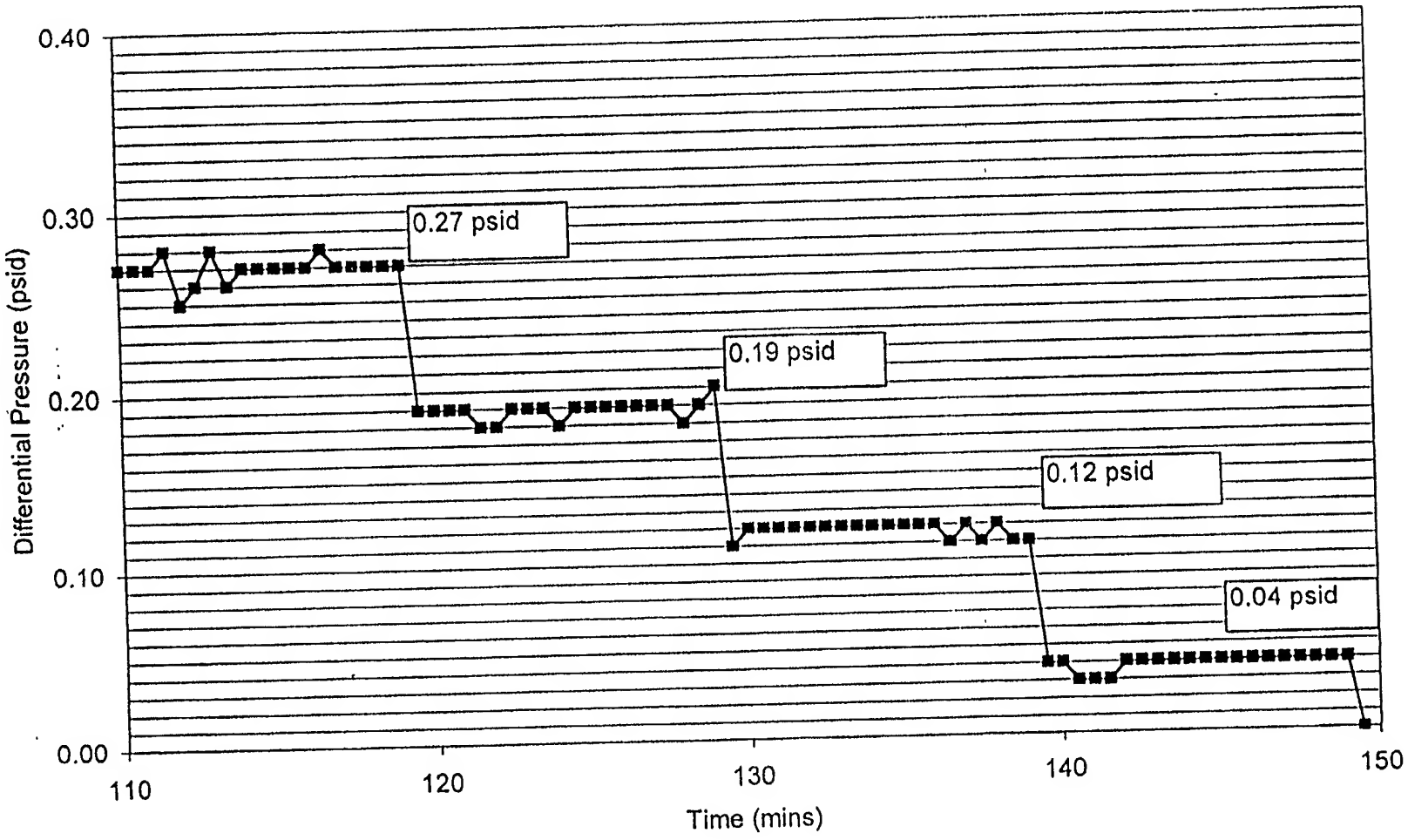
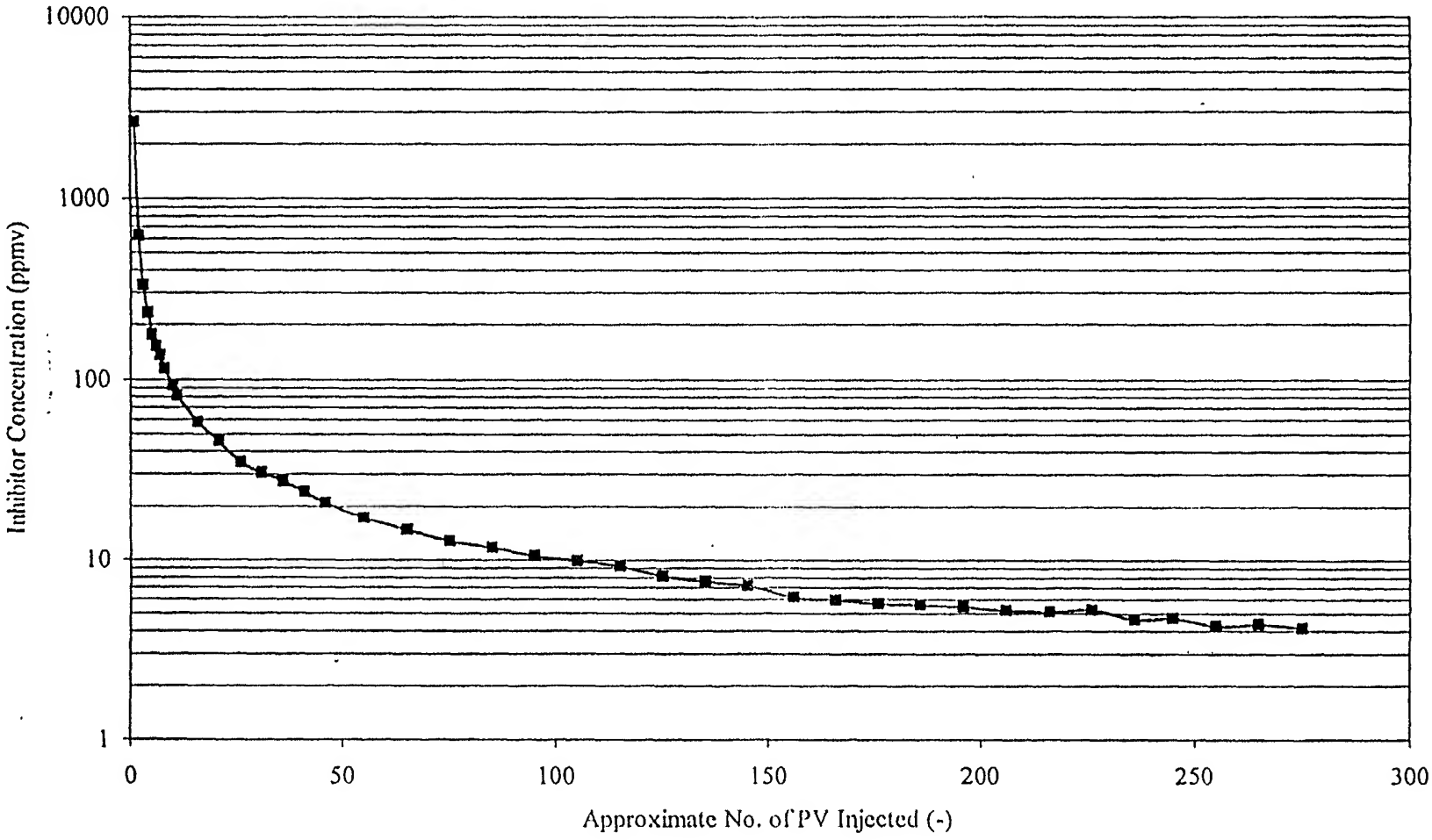


Figure 22. Plug 5. Scale Inhibitor Return Curve.



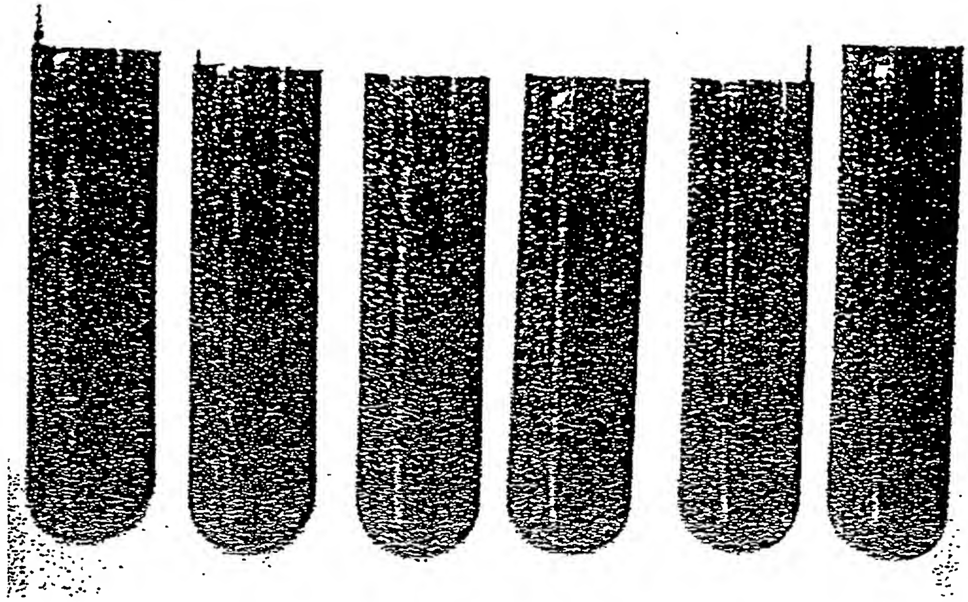


Figure A1. Tubes 1 – 2, crude oil. Tubes 3 – 6, ArivaSol spearhead.

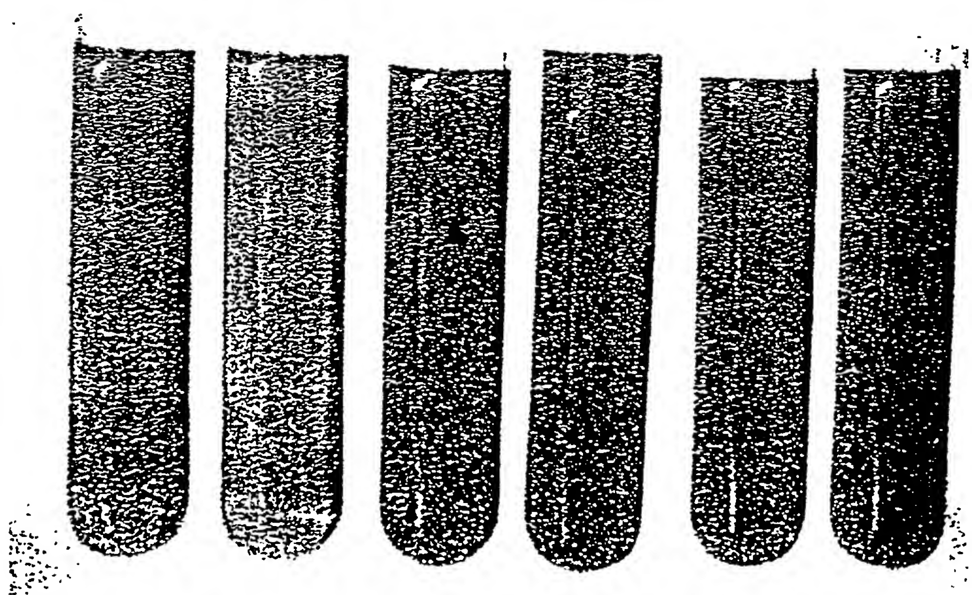


Figure A2. Tubes 7 – 8 ArivaSol spearhead. Tubes 9 - 11, OSi EXP1. Tube 12, OSi EXP2.

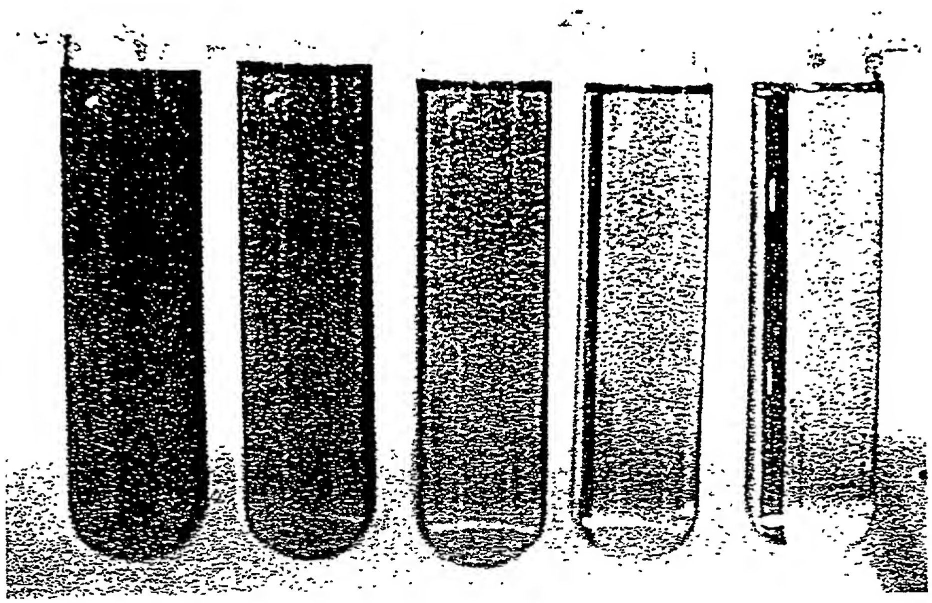


Figure A3. Tube 13, OSi EXP1. Tubes 14 – 17, ArivaSol overflush.

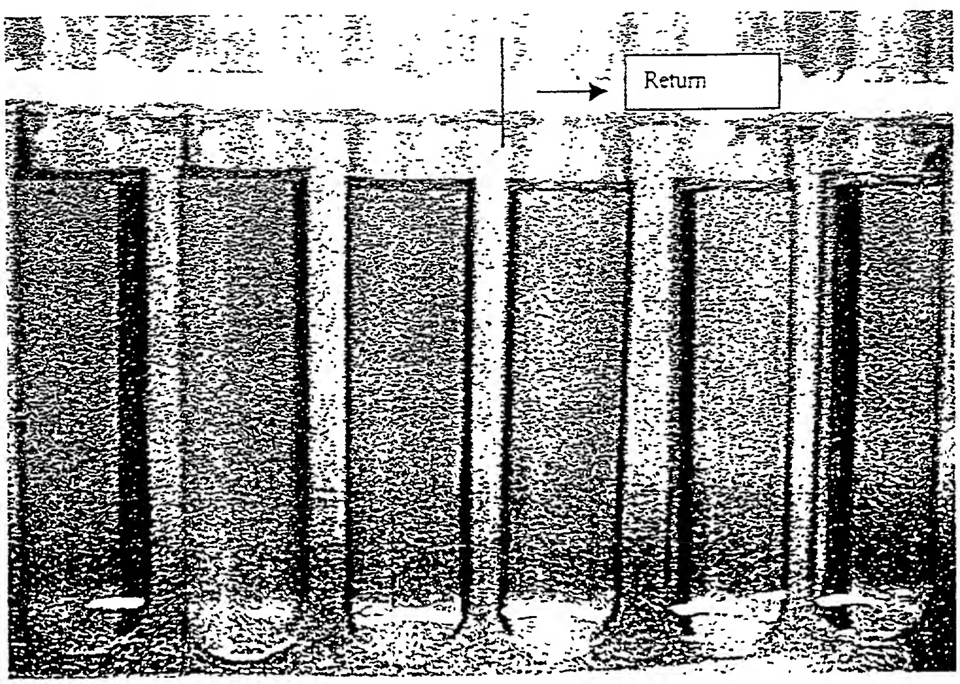


Figure A4. Tubes 18 – 20, ArivaSol overflush. Tubes 21 – 23 ArivaSol overflush return.

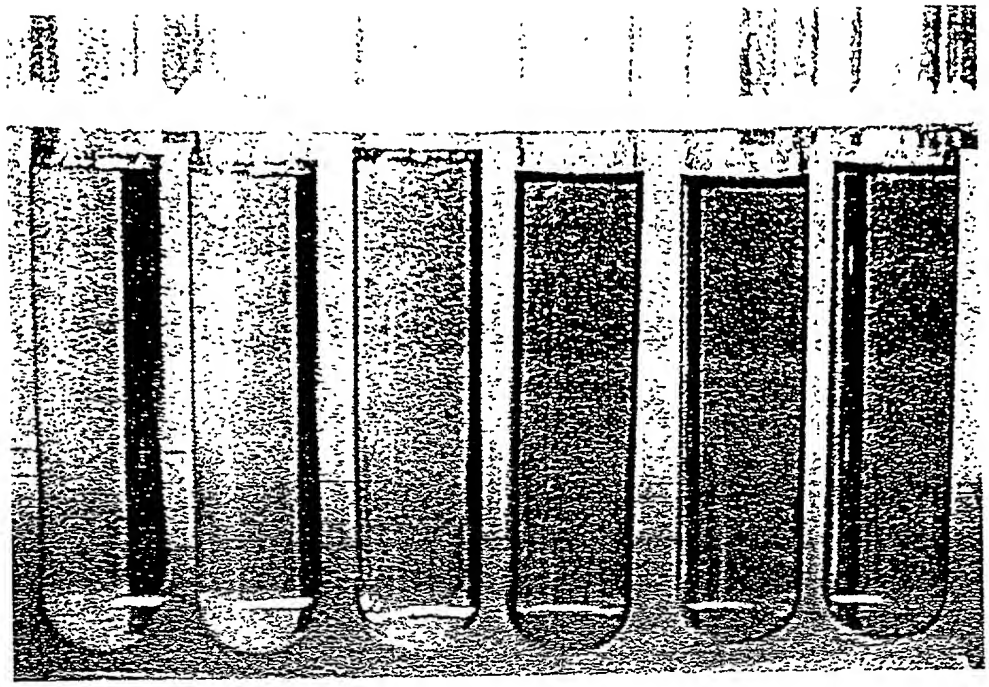


Figure A5. Tubes 24 – 26, ArivaSol overflush return. Tubes 27 – 28, OSi EXP1 return. Tube 29, OSi EXP2 return.

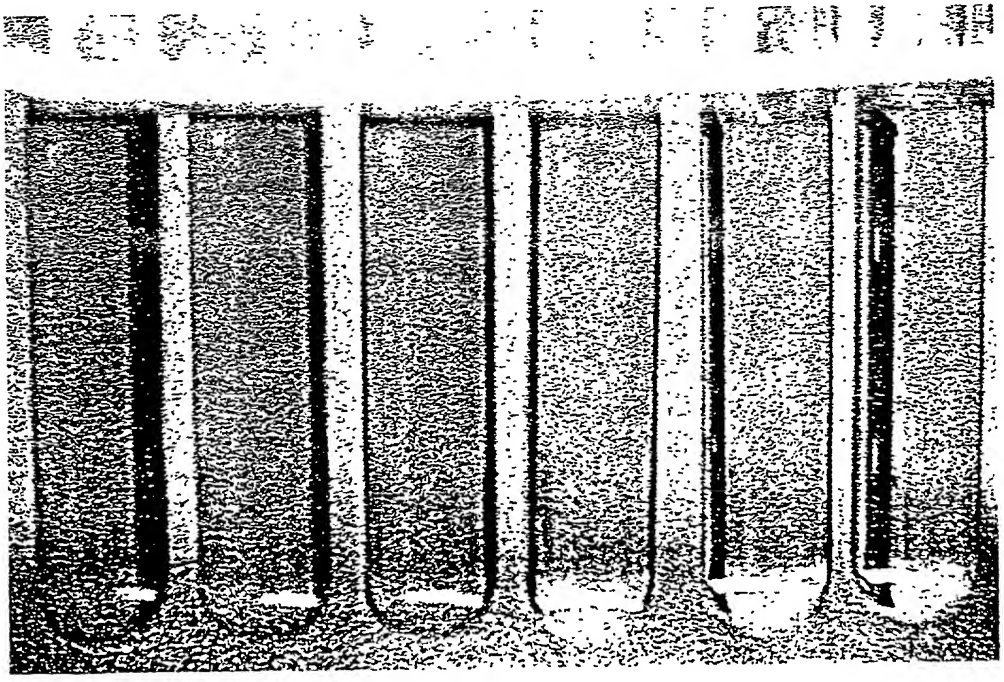


Figure A6. Tubes 30 - 31, OSi EXP2 return. Tubes 32 - 35, ArivaSol spearhead return.

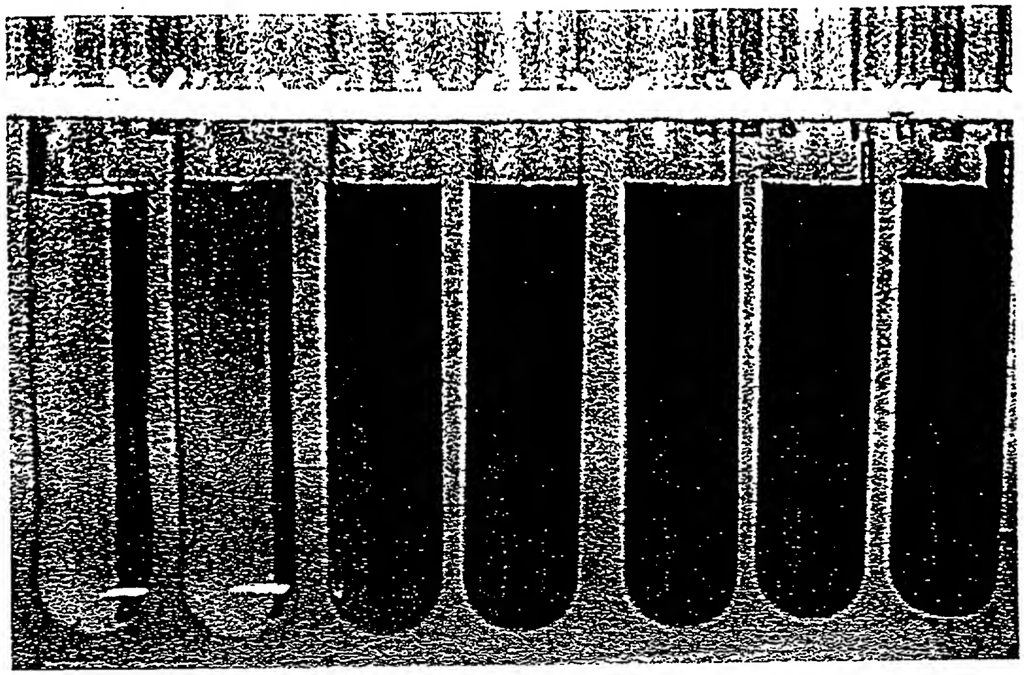


Figure A7. Tubes 36 – 37, ArivaSol spearhead return. Tubes 38 – 42, crude oil return.

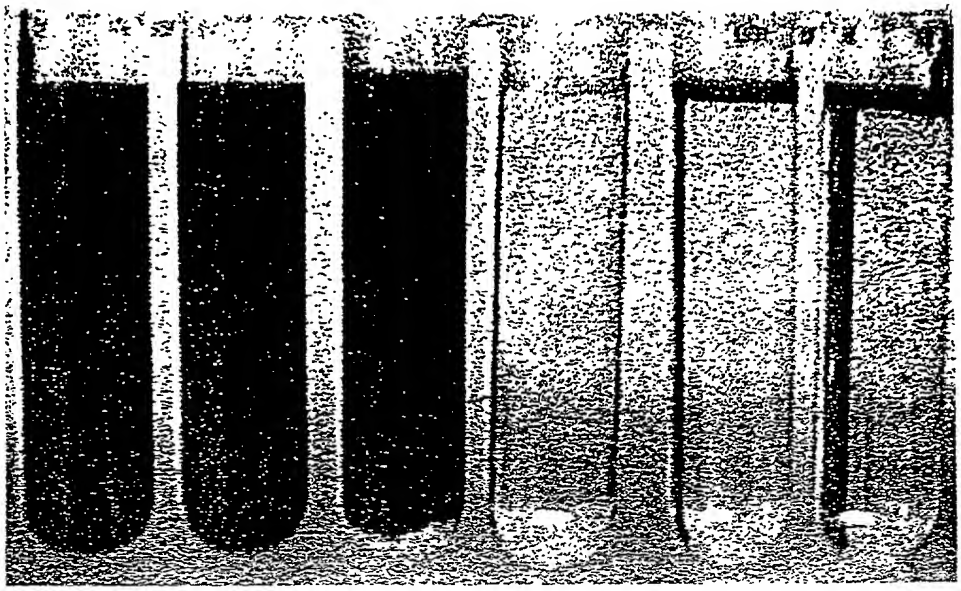


Figure A8. Waterflood: oil dead volume and water breakthrough.

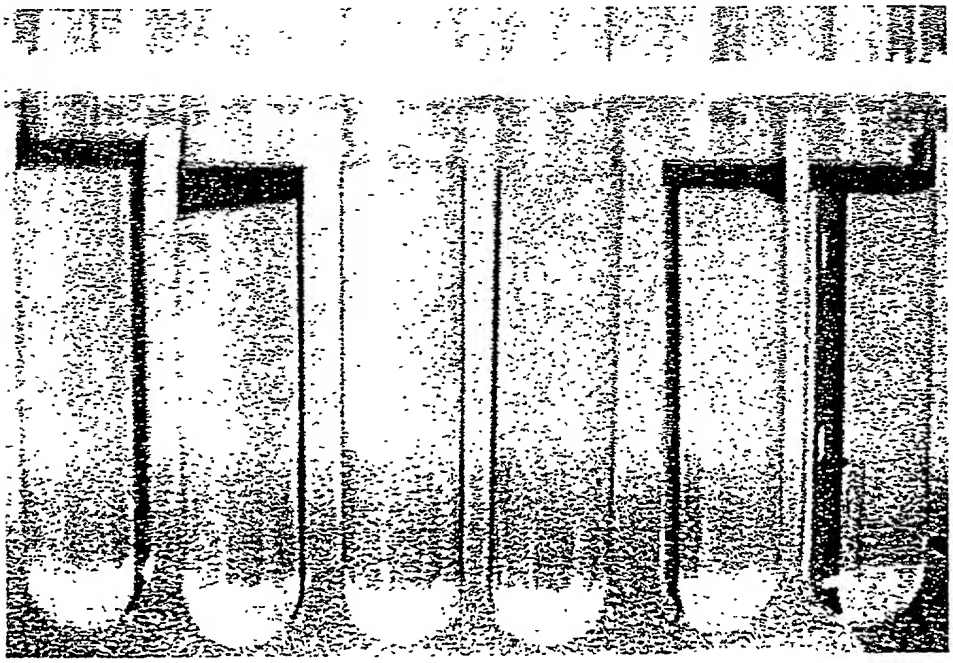


Figure A9. Water production, pore volumes 4 – 9.